

REMARKS

Reconsideration and further examination of this application is hereby requested. Claims 1-18, 23-26, and 30-35 are currently pending in the application. Claims 19-22 and 27-29 have been canceled.

Amendments to the claims have been made according to the recently announced revised amendment format. See Amendments in Revised Format Now Permitted, 1267 O.G. 106 (Feb. 25, 2003).

A. The Information Requirement

Applicant acknowledges the Rule 105 Requirement for Information. A reply to the Requirement for Information is filed herewith as a separate paper (USPTO Form 1449). Please note that the official copies of the copyright registrations noted on the Form 1449 received directly from the Copyright Office did NOT contain the original submission of pages of code that accompanied the applications for copyright (now registrations No. TX4-819-010, TX4-819-011, TX4-819-009). However, we have attached copies of the code that was submitted with those applications from the applicant's electronic files of the same.

B. Objection to the Specification

The Examiner has objected to the specification as not explicitly setting forth subject matter that was originally incorporated by reference, specifically the contents of three

copyright registrations.

The copyright Certificates of Registration, issued by the U.S. Copyright Office, are submitted herewith, together with the pages of source code that were submitted along with those original applications in reply to the Rule 105 Requirement for Information. Applicant sincerely believes that it is not necessary to add the contents of these copyright registrations into the specification. Even if the copyright certificates did include computer source code, the computer source code is not necessary or essential to enable a person of ordinary skill in the art to use or practice the invention. The Declaration of Richard J. Rabbitz (a copy of which is re-submitted with this paper for the Examiner's convenience of review) sets forth a factual basis of how a person of ordinary skill in the art is enabled to practice the invention, that factual basis being entirely independent of access to the source code of the cited copyright registrations. In sum, that is why Applicant believes that the contents of the copyright registrations are not probative of the enablement issue.

Accordingly, Applicant respectfully declines the invitation to add the contents of the copyright registrations to the specification.

C. Rejection Under § 101

Claims 19-22 have been rejected under 35 U.S.C. § 101 as lacking patentable utility. In particular, the Examiner questions whether the claims recite a useful, concrete, and tangible result. This rejection has been mooted by cancellation of claims 19-22.

D. Rejection Under § 112, ¶ 1st - Written Description

Claims 1-18, 23-26, and 30-35 have been rejected under 35 U.S.C. § 112, ¶ 1st as failing to meet the written description requirement. In particular, the Examiner notes concern whether the application as filed evinced that Applicant had possession of the subject matter now claimed at the time the application was filed. This rejection is respectfully traversed based on the following arguments.

As filed, the application contained indications that the invention as presently claimed is what the inventor regarded as his invention. In fact, the present claims differ little from the claims as filed - they have been amended only for clarification. The fact that the limitations were recited in originally filed claims is an indication that the inventor regarded those limitations as being his invention. Controlling authority holds that:

original claims constitute their own description.
Later added claims of similar scope and wording
are described thereby.

In re Koller, 613 F.2d 819, 204 U.S.P.Q. 702 (C.C.P.A. 1980).

Furthermore, the specification as originally filed contains descriptions in the "Summary of the Invention" section that indicate that the inventor regarded the limitations recited in the claims as being his invention. See page 3, line 23 through page 6, line 7, and page 7, lines 14-20.

The Examiner has suggested that Applicant submit computer code corresponding to the cited copyright registrations. Applicant respectfully submits that submission of computer code is not necessary to establish an adequate written description. Controlling authority holds that:

flow charts or source code listings are not a requirement for adequately disclosing the functions of software.

Fonar Corp. v. General Electric Co., 107 F.3d 1543, 1549, 41 U.S.P.Q.2d 1801, 1805 (Fed. Cir. 1997). Applicant has exceeded this standard by supplying a flowchart (refer to Fig. 2) as part of the description of the invention.

It is noted that since the claims in the present application are directed to a field other than biotechnology (i.e., no DNA or RNA are claimed), written description standards unique to the biotechnology arts have no applicability in this situation.

For the above reasons, Applicant respectfully requests that the Examiner carefully reconsider and withdraw the written

description requirement rejection of claims 1-18, 23-26, and 30-35 under 35 U.S.C. § 112, ¶ 1st.

E. Rejection Under § 112, ¶ 1st - Enablement

Claims 1-18, 23-26, and 30-35 have been rejected under 35 U.S.C. § 112, ¶ 1st as failing to meet the enablement requirement. Specifically, the Examiner has expressed concern that the disclosure may not be sufficient for a person of ordinary skill in the art to make and/or use the claimed invention without resort to undue experimentation. This rejection is respectfully traversed based on the following arguments.

Applicant and the Examiner appear to be in concurrence that the standard for enablement is whether undue experimentation is necessary for a person of ordinary skill in the art to make or use the invention.

However, the Examiner has not found the Rabbitz Declaration submitted with the Amendment of June 28, 2002 (and re-submitted herewith, along with a copy of Mr. Rabbitz's *curriculum vitae*) to be persuasive. Specifically, the Examiner indicates a need to review the supporting documents cited by Mr. Rabbitz, two SKT manuals, to be able to fully evaluate the Rabbitz Declaration. Both of the cited STK manuals (i.e. STK User's manuals for versions 4.0.5 and 3.0) are submitted herewith in reply to the

Rule 105 Information Requirement.

The Declaration of industry expert Richard J. Rabbitz shows that it would take one or more persons of ordinary skill in the art (either in a solitary effort or working as a team) 440 man-hours to make and use the claimed invention based solely on the disclosure as filed and publicly available information. Please note that the Declaration of Richard J. Rabbitz (dated 6/24/02) is herewith submitted for consideration. The Examiner will note that the Declaration has NOT changed, however, we have included with the declaration Mr. Rabbitz' resume to further assure the Examiner of the credentials of Mr. Rabbitz in making this declaration in support of patentability.

The estimated software development time of 440 man-hours would not amount to undue experimentation. The U.S. Court of Appeals for the Federal Circuit has ruled that even 800 man-hours spent in developing a working system according to the teachings of a patent disclosure does not meet the level of undue experimentation. *Lindemann Maschinenfabrik GmbH v. American Hoist and Derrick Co.*, 730 F.2d 1452, 221 U.S.P.Q. 481 (Fed. Cir. 1984).

Accordingly, Applicant respectfully submits that claims 1-18, 23-26, and 30-35 are enabled by the specification.

F. Claim Interpretations

The Examiner indicates that the recited satellite sensor obscuration is being treated as a statement of intended use of image analysis. Applicant respectfully disagrees with this approach to construing the claims, for the following reasons.

In the case of the apparatus claims 25 and 26, the recitations of "objects of a satellite system analysis scenario that are capable of causing obscuration," "portraying the amount of obscuration," "calculating the percentage of obscuration" are not merely statements of intended use because the actions recited are software steps implemented via a machine, the implementation of these actions thus constitute structural limitations. The case law cited by the Examiner does not address the special situation of apparatus structure being a computer implementing software. The opinion in *In re Casey*, 152 U.S.P.Q. 135 (C.C.P.A. 1967) analyzed the patentability of an apparatus claim for a tape dispenser, not a computer implementing software. The opinion in *In re Otto*, 136 U.S.P.Q. 148 (C.C.P.A. 1963) analyzed the patentability of an apparatus claim for a hair curler, not a computer implementing software.

In the case of the process (or method) claims 1-12 and 30-32, Applicant respectfully submits that any recited actions are material limitations of the claims and may not be read out of the

claim as mere intended use. The "statement of intended use" canon of claim construction is not germane to process (or method) claims.

In the case of the computer program product claims 13-18 and 33-35, Applicant respectfully submits that the recited software instructions embodied on the computer readable medium are material limitations of the claims. It is further respectfully submitted, that by analogy to process (or method) claims, the "statement of intended use" canon of claim construction is not germane to claims for a computer program product.

G. The Anticipation Rejections

G.1. Anticipation based on § 102(a)

Claims 1-18, 23-26, and 30-35 have been rejected under 35 U.S.C. § 102(a) as being anticipated by "STK version 3.0 or STK version 4.0.5 or 'Sensor Obscuration Tool (STK/Advanced VO)'". This rejection is respectfully traversed based on the following arguments.

The Satellite Tool Kit (or "STK") products and their related documentation is published exclusively by Analytical Graphics, Inc., the assignee of the entire right, title, and interest in the present application. The inventors created the claimed invention in natural course of their employment with Analytical Graphics, Inc. See Declaration of Paul Graziani at page 2, lines

14-18. Thus, the publication and sale by Analytical Graphics, Inc. of STK implementing the claimed invention is attributable solely to Applicant's own acts and is not, thus, an act "by others" as is required by § 102(a).

Accordingly, Applicant respectfully requests that the § 102(a) anticipation rejection be withdrawn.

G.2. Anticipation based on § 102(b)

Claims 1-18, 23-26, and 30-35 have been rejected under 35 U.S.C. § 102(b) as being anticipated by "STK version 3.0 or STK version 4.0.5 or 'Sensor Obscuration Tool (STK/Advanced VO)'". This rejection is respectfully traversed based on the following arguments.

Sale of STK products implementing the claimed invention did not occur more than one year prior to the filing date of the present application. See Declaration of Paul Graziani at page 2, lines 7-13.

Accordingly, Applicant respectfully requests that the § 102(b) anticipation rejection be withdrawn.

G.3. Anticipation based on § 102(f)

Claims 1-18, 23-26, and 30-35 have been rejected under 35 U.S.C. § 102(f) as being anticipated by "STK version 3.0 or STK version 4.0.5 or 'Sensor Obscuration Tool (STK/Advanced VO)'". This rejection is respectfully traversed based on the following

arguments.

Any implementation of the claimed invention in STK is attributable solely to the work Applicants, not others. See Declaration of Paul Graziani at page 2, lines 14-18.

Accordingly, Applicant respectfully requests that the § 102(f) anticipation rejection be withdrawn.

H. The Obviousness Rejection

Claims 1-18, 23-26, and 30-35 have been rejected under 35 U.S.C. § 103(a) as being obvious over Claffey *et al.* (U.S.P. 5,864,489) in view of Blank (U.S.P. 5,469,536), Cok (U.S.P. 5,710,839), and admissions,¹ applied in various combinations.

In order for a patent claim to be obvious, the prior art must teach or fairly suggest each and every limitation recited by the claim. That is because the claim must be considered as a whole -- it may not be distilled down to a "gist."

Independent process claim 1 recites the limitations of:

- selecting a view perspective from the sensor object along the boresight;
- selecting objects of a satellite system analysis scenario that are capable of causing obscuration;

at lines 7-10, and

¹ It appears that the Examiner has cited to a portion of the Rabbitz Declaration as being an admission. Since Mr. Rabbitz is neither an inventor nor an employee of the assignee, then his testimony does not constitute an admission. The Rabbitz Declaration includes expert testimony and an explanation of the factual basis underlying that testimony. The Rabbitz Declaration is submitted to aid the Examiner.

providing a graphical display to a user, during the animation, portraying the amount of obscuration of the sensor pattern, and source of obscuration of the sensor pattern, over a predetermined time period;

at lines 23-26. Independent claims 7, 13, 23, and 25 recite similar limitations. Independent method claim 30 recites the limitations of:

supplementing the available view perspectives for the satellite system analysis program so as to include a view from the sensor, along the boresight of the sensor;

supplementing the satellite system analysis program with a code segment that enables a user to select objects to be taken into account for analysis of obscuration of the sensor pattern as viewed along the boresight of the sensor;

at lines 6-12. Independent claim 33 recites similar limitations.

Applicant has not admitted these limitations to be in the prior art, and when considered together, the Claffey *et al.*, Blank, and Cok references do not teach or suggest any of these limitations.

Although Claffey *et al.* discloses the general idea of how to select objects, it makes no suggestion to select the particular objects claimed, that is objects to be taken into account for sensor obscuration. Claffey *et al.* does not disclose selecting a view perspective along a boresight.

The Blank disclosure is directed to an entertainment device enables modification of an image by substituting a selected

background image in place of an original background image. The selection taught has nothing to do with sensor obscuration, nor does it have anything to do with selecting a particular view perspective.

The Cok disclosure is directed to an image processing algorithm that modifies an image by intentionally obscuring a selected portion of the image by blending that portion with surrounding parts of the image. This pixel-by-pixel blending process is essentially the exact opposite of the claimed invention. Rather than making the selected portion stand out with a contrasting color, the Cok algorithm makes the selected portion blend into its surroundings and become indistinct. The selection taught by Cok has nothing to do with sensor obscuration, nor does it have anything to do with selecting a particular view perspective.

For the above reasons, Applicant respectfully submits that the Examiner has not established a *prima facie* case of obviousness with respect to claims 1-18, 23-26, and 30-35.

I. Demonstration of the Sensor Obscuration Tool

Applicant would like to offer that the sensor obscuration tool be demonstrated to the Examiner as part of the review of this office action response. Applicant feels that such a demonstration will go a long way toward assisting the Examiner in

his further understanding of the present invention tool. Applicant will send the software disk containing the Sensor Obscuration tool to the Examiner in a supplemental response to the pending office action together with the pages of code required by the Examiner, however, it is important to note that the Applicant will require certain information from the Examiner's computer to install the license that is required in order to run the program. Further, the Sensor Obscuration tool itself is not straightforward in terms of its installation and demonstration. For this reason, Applicant requests the courtesy of an interview before the Examiner issues the next office action so that this tool can be installed and/or demonstrated to the Examiner as part of the Examiner's review of this response.

Closing

For the above reasons, Applicant respectfully submits that the application is in condition for allowance with claims 1-18, 23-26, and 30-35. If there remain any issues that may be disposed of via a telephonic interview, the Examiner is kindly invited to contact the undersigned at the local exchange given below.

The Commissioner is authorized to charge any necessary fees, and conversely, deposit any credit balance, to Deposit Account No. 18-1579.

AMENDMENT UNDER 37 C.F.R. § 1.111
Appln. No. 09/332,760

PATENT APPLICATION

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Jon L. Roberts", with a long horizontal flourish extending to the right.

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